MANAGEMENT PLAN PART 3

White River National Wildlife Refuge

ANNUAL WATER MANAGEMENT PROGRAM

1991 Report

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I. GENERAL - Existing Water Supplies

The White River started and ended 1991 above the 25 foot flood stage at St. Charles. Monthly precipitation exceeded the ten year average in nine out of twelve months with 7 months recording over 5 inches of rainfall. The 71.52 inches of precipitation for 1991 exceeded the ten year average by 18 inches.

By March the river had dropped from flood stage down to 15 feet, but 16 inches of rainfall in April quickly brought the river back to flood stage. It was mid-July before the water dropped below 18 feet, delaying water removal from the green tree reservoirs and moist soil areas.

Precipitation And River Stages

	River Stage (ft.) Max.**	Min.	Deviation(ft.)	Precipitation(in.) 1991	Ten Year Average 1981-90
January	29.7	25.8	3.9	3.33	3.92
February	26.6	24.2	2.4	6.15	5.63
March	24.1	15.0	9.1	5.39	5.04
April	28.4	21.8	6.6	16.31	4.81
May	28.9	24.5	4.4	5.82	5.27
June	24.4	18.7	5.7	1.05	3.40
July	18.8	12.5	6.3	4.40	3.63
August	11.8	10.0	1.8	5.07	2.27
September	*	*	*	4.31	2.53
October	*	*	*	5.19	5.24
November	23.2	20.1	3.1	4.31	6.33
December	26.5	23.6	2.9	10.19	5.42
Totals				71.52	53.49

*Water level below the White River gauge.
**Flood stage is 25 feet measured at St. Charles.

II. MANAGEMENT UNITS

All water management units are subject to overflow from the White River except the Farm Unit ponds, the White River Levee GTR, and the borrow pits east of the White River Levee. At 18 feet on the St. Charles gauge, water begins to overflow into the refuge forest from the White River. At 25 feet on the St. Charles gauge, the river is completely over its banks. The Mississippi River influences the lower two-thirds of the refuge, which means flooding can occur in that part of the refuge and will not be reflected on the St. Charles gauge. Inversely, if the flood water comes from the White

River and the Mississippi River is low, the northern portion of the refuge may flood while the southern portion does not.

A. Demonstration Area

As the White River water level dropped the Demonstration Area Moist Soil Unit was drained in June. The upper pool and one-half of the lower pool were planted with milo in late June. The remainder of the lower pool was managed as a moist soil area. Both pools were watered twice during July and August by pulling stoplogs in the water storage area above the area. An aerial treatment of 2,4-D was applied to the moist soil area in August to reduce competition from cocklebur and coffee bean. An excellent stand of milo was produced with good production of barnyard grass, millet, and smartweed underneath.

The upper levee required repair with rock when localized heavy rains caused damage to the levee and road.

The lower pool was slowly flooded starting in late October and brought to full pool by mid November.

By mid November the upper pool was brought to half pool. The number of waterfowl utilizing this area was high with up to 30,000 ducks including teal, wigeons, mallards, canvasbacks, and ringnecks. Several hundred Canada geese and white front geese also used this area. By early December the White River had reached flood stage, and this area was flooded too deep for dabblers. The area was used as a rest area and feeding area for divers.

B. Frazier Lake GTR

Water to flood the Frazier Lake Green Tree Reservoir comes from the water storage unit above the water above the Demonstration Area or water backing into Frazier Lake from the White River Chute. Stoplogs on the lower end were closed in early November and full pool was reached by mid November. This GTR received heavy use by mallards and wood ducks. The White River Chute started backing into the area by early December but numerous shallow flooded ridges continued to receive heavy waterfowl use.

C. Farm Ponds and Moist Soil Sites

Pond 2A, 2B, and 2C were lowered in March to start moist soil production. Buckwheat was planted in June on Pond 2C, and the area was flooded in October.

Pond 5 was also lowered in March, and an acre was planted in Japanese millet. Canada geese and waterfowl fed heavily on this area after it was flooded in late October. Smartweed grew dense stands on the edges of the other ponds and moist soil areas.

Levees were closed and stubble rolled down in early November on 35 acres of cooperative farmed rice. This field received use by several thousand mallards along with white front and Canada geese.

D. Goose Lake Moist Soil Unit

The water did not fall low enough in LaGrue Bayou until early July to pull water off of Goose Lake. Good stands of nut sedge and barnyard grass were produced.

The water control gate was removed in July for repair. This gate will be repaired when water falls in 1992. A temporary structure was installed in October to begin filling Goose Lake. Good waterfowl use was reported on this unit.

E. Parish Lake

The permanent structure at Mossy Lake was repaired in 1989. This structure holds water levels higher in Mossy, Parish, North Moon, East Moon, and Whiskey Lakes to increase fishing opportunity and success. Waterfowl use these series of lakes for resting and feeding on surrounding ridges.

F. Tarleton Creek GTR

This unit has two water control structures, one on Tarleton Creek and the other on Thomas Bayou. The structure on Tarleton Creek remains closed and needs repair work due to erosion problems. The Thomas Bayou structure was not closed this fall to allow the area to flood naturally and because of a timber sale in the area. The area flooded in December and thousands of mallards were observed in the flooded timber.

G. Dry Lake Moist Soil Unit

The Dry Lake structure was closed in mid June to allow the 200 acre moist soil area to grow. A dense stand of barnyard grass covered the entire area. The area was slowly flooded starting in late October by blowing beaver dams that were holding water in Honey Locust and Wolf Bayou. There was no success in getting water from the ship canal to Levee B and through Wolf Bayou because the area was silted in and beavers constantly dam up the bayou.

Waterfowl use was excellent on this area with over 30,000 ducks on the area at one time. The area was flooded by the river in December and most of the field was too deep for dabblers. The area then held 20,000 ringnecks and 1,000 canvasbacks along with several thousand mallards the rest of the year. If possible, in 1992 the area will be planted with 50 acres of milo to increase plant diversity and to increase the length of time waterfowl can use the area.

Three acres of the area were planted in winter wheat for Canada geese. There were 150 geese using the area until the water flooded the area.

H. Reservoir A and B GTRs

These two green tree reservoirs are capable of flooding 5,000 acres of bottomland forest. Water for flooding the areas was diverted from the ship canal of the river into Reservoir B and then into Reservoir A. Water from

Reservoir B is diverted into Wolf Bayou and is then used to flood the Dry Lake Unit. The water control gate on the ship canal was pulled out and cleaned in October. Flooding of Reservoirs B and A began in October and they were at full pool by mid November. Waterfowl use of both reservoirs was good. These two GTRs are the only public duck hunting areas on the refuge and are open 3 days a week to morning only hunting. Hunter pressure and success remained high, especially during the last two split waterfowl hunting seasons. There were thousands of wood ducks observed daily in these GTRs.

I. Parish Bayou - Oxbow Lake GTR

The Oxbow structure is nonfunctional, and there are no plans to repair it because of little waterfowl use and habitat available.

The gates on Parish Bayou were closed in October to catch rainfall and runoff water.

J. Willow Lakes/Water Storage Area

This area contains a 300 acre marsh resulting from a dead tree reservoir created in the early 1970s. This unit contains an active bald eagle nest that has fledged eagles 9 out of the past 10 years. Water levels have been held constant to avoid disturbances to the active eagle nest.

K. Prairie Lakes GTR

The control gate was closed in October to catch available rainfall. The area was in full pool by mid November and received moderate waterfowl use.

L. White River Levee GTR

An informal agreement with the White River Levee Board sets a 145.5 MSL water level to be maintained on agricultural land east of the refuge during peak waterfowl times. Although natural depressions and low fields held sufficient water, many fields remained too dry for waterfowl use.

M. Bear Lake GTR

The Bear Lake structure was opened in late June to begin draining water off this GTR. This structure was closed in October to begin flooding the timber. An excellent mast crop provided tremendous feeding opportunities, and this GTR was heavily utilized by waterfowl.

N. Taylor Lake GTR

The Taylor Lake structure was closed in early November to catch available rainfall. The area received heaviest utilization by waterfowl when flooding occurred in mid December.

O. Beaver Impoundments

There are more than 4,000 acres of beaver impoundments existing on the refuge. Explosives are used to drain major impoundments to prevent the killing of high quality mast species. A large portion of beaver dams are located in GTRs and are opened to prevent the deadening of large areas. Many dams not affecting timber growth are left for waterfowl and wetland habitat.

P. South Levee Borrow Ditch.

This 7 acre unit is nonfunctional due to excessive erosion around the water control structure. Overflow from the White River provided some feeding opportunities for waterfowl late in the year.